Outline steps to finish the project:

Extracting the data (SQL)

1. I extracted global average temperature from global_data database and save the data in global_result.csv.

```sql
SELECT *
FROM global_data;
```

2. I checked whether Shanghai is in city_list.

```sql
SELECT *
FROM city_list
WHERE city = 'Shanghai';
```

3. I extracted average temperatures in Shanghai by year from city_data and store the data in shanghai_result.csv.

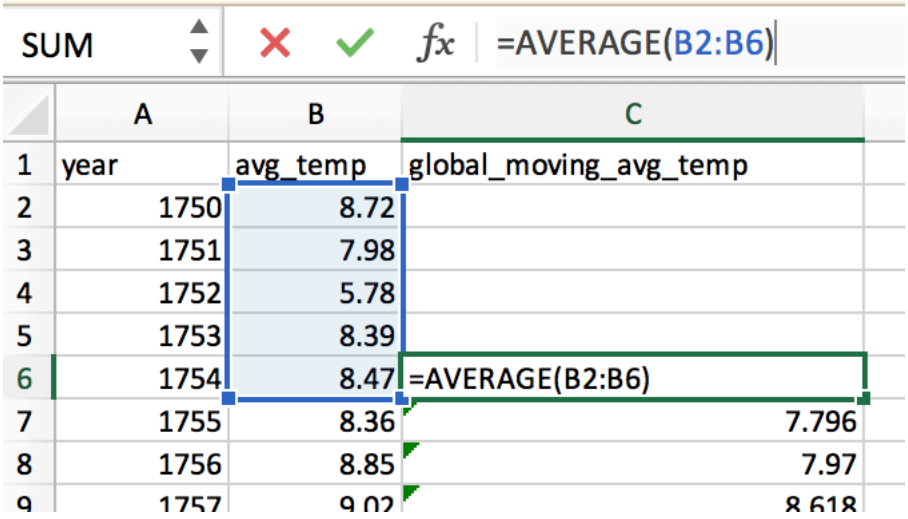
```sql
SELECT *
FROM city_data
WHERE city = 'Shanghai';
```

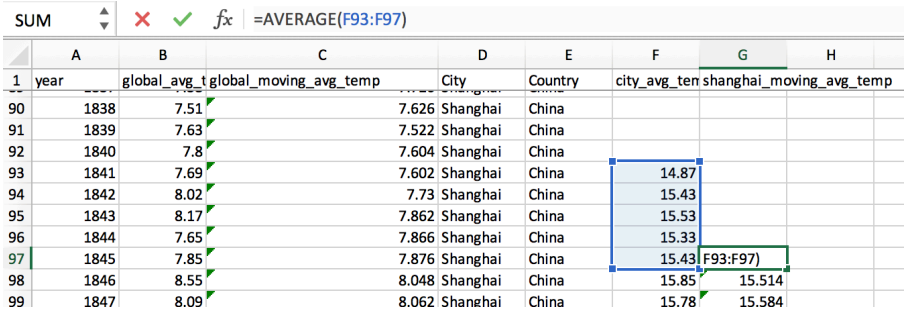
Create a line chart (Excel)

1. I combined two csv files in one sheet in order to make the plot.

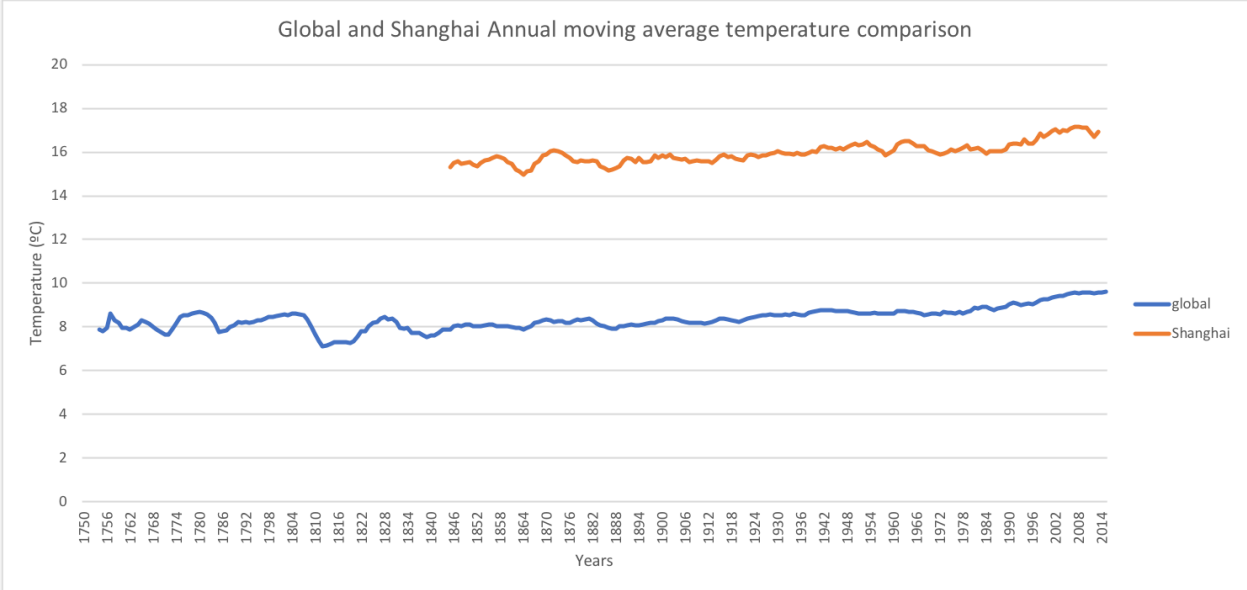
	A	B	C	D	E	F	G
1	year	global_avg_temp	global_moving_avg_temp	City	Country	city_avg_temp	shanghai_moving_avg_temp
94	1842	8.02	7.73	Shanghai	China	15.43	
95	1843	8.17	7.862	Shanghai	China	15.53	
96	1844	7.65	7.866	Shanghai	China	15.33	
97	1845	7.85	7.876	Shanghai	China	15.43	15.318
98	1846	8.55	8.048	Shanghai	China	15.85	15.514
99	1847	8.09	8.062	Shanghai	China	15.78	15.584
100	1848	7.98	8.024	Shanghai	China	15.02	15.482
101	1849	7.98	8.09	Shanghai	China	15.44	15.504
102	1850	7.9	8.1	Shanghai	China	15.6	15.538
103	1851	8.18	8.026	Shanghai	China	15.22	15.412
104	1852	8.1	8.028	Shanghai	China	15.44	15.344
105	1853	8.04	8.04	Shanghai	China	15.79	15.498
106	1854	8.21	8.086	Shanghai	China	15.99	15.608
107	1855	8.11	8.128	Shanghai	China	15.84	15.656
108	1856	8	8.092	Shanghai	China	15.55	15.722
109	1857	7.76	8.024	Shanghai	China	15.93	15.82
110	1858	8.1	8.036	Shanghai	China	15.49	15.76
111	1859	8.25	8.044	Shanghai	China	15.64	15.69
112	1860	7.96	8.014	Shanghai	China	15.05	15.532
113	1861	7.85	7.984	Shanghai	China	15.29	15.48
114	1862	7.56	7.944	Shanghai	China	14.47	15.188

2. I calculated moving average temperature for global data and data from Shanghai, using the same methods as the previous lesson illustrated.





3. I made a 2-D Line diagram to compare Shanghai's temperatures with the global temperature, set year as X-axis and the moving average temperature as Y-axis.



Analyzing the data

1. Overall, the annual average temperature in Shanghai is higher than global annual average temperature, and the difference between the two is consistent from 1840 to 2013.
2. From 1990 to 2000, the temperature in Shanghai grows much rapidly than global temperature. Apart from this decade, the growth between these two is almost the same.
3. The overall trend illustrates that not only Shanghai but also the world is getting hotter, and it seems to be consistently warmer since 1990.

4. But it seems that Shanghai's annual average temperature fluctuated from 1840 to 1910, while the worldwide annual average temperature remained at about 8 ºC.